

What is claimed is:

1. An abrasive article comprising:
a backing plate having a first major surface and a second major surface opposite the first major surface, wherein the backing plate includes a central aperture extending therethrough, and wherein the backing plate comprises a thermoplastic binder material and fibrous reinforcing material;
an abrasive layer secured to the first major surface of the backing plate; and
a fastener press fitted to the backing plate so as to define the central aperture.
2. The abrasive article of claim 1, wherein the backing plate is generally circular.
3. The abrasive article of claim 2, wherein the article is a flap disc.
4. The abrasive article of claim 2, wherein the abrasive layer is comprised of nonwoven abrasive material.
5. The abrasive article of claim 2, wherein the thermoplastic binder material includes polyamide.
6. The abrasive article of claim 2, wherein the thermoplastic binder material includes polyester.
7. The abrasive article of claim 2, wherein the fibrous reinforcing material comprises glass fibers.
8. The abrasive article of claim 2, wherein backing plate further comprises of glass-filled nylon.

9. The abrasive article of claim 2, wherein the backing plate has a thickness of from about 0.51 mm to about 1.78 mm.

10. The abrasive article of claim 2, wherein the backing plate has a thickness of from about 1.02 mm to about 1.40 mm.

11. The abrasive article of claim 2, wherein the backing plate has a thickness of about 1.27 mm.

12. The abrasive article of claim 2, further comprising adhesive disposed between the abrasive layer and the first major surface of the backing plate.

13. The abrasive article of claim 2, wherein the fastener is a quick-change type.

14. The abrasive article of claim 2, wherein the fastener is shaped to form a Tinnerman nut.

15. The abrasive article of claim 2, wherein the fastener is shaped to form a Grit-lock nut.

16. A method of making an abrasive article comprising:
applying adhesive to a backing plate having a central aperture, wherein the backing plate comprises a thermoplastic binder material and fibrous reinforcing material;
disposing abrasive material onto the adhesive;
disposing the backing plate onto a jig;
disposing a fastener having tines so as to be concentric with the central aperture; and
pushing the tines through the backing plate and folding the tines so as to fixably attach the fastener to the backing plate.

17. A method of abrading a surface, said method comprising:
providing an abrasive article comprising:

a backing plate having a first major surface and a second, major surface opposite the first major surface, wherein the backing plate includes a central aperture extending therethrough, and wherein the backing plate comprises a thermoplastic binder material and fibrous reinforcing material;

an abrasive layer secured to the first major surface of the backing plate; and

a fastener press fitted to the backing plate so as to define the central aperture;

attaching the abrasive article to a shaft through the central aperture of the abrasive article;

contacting at least a portion of the abrasive layer with a surface of a workpiece; and

moving the abrasive article relative to the surface of workpiece such that at least a portion of the workpiece is abraded by at least a portion of the abrasive layer.

18. The method according to claim 17 wherein the backing plate is generally circular.